Remarks

Claims 1-7, 13-18, and 22-27 are pending in the application. Claims 8-12 and 19-21 are withdrawn.

The Examiner's restriction requirement is made final.

Claims 1-7, 13-18, 22-24, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazarinov et al. (2004/0076208, hereinafter Kazarinov), and further in view of Appel e al. (5,659,414, hereinafter Appel) and Sugiya (2004/0136053, hereinafter "Sugiya").

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kazarinov, Appel and Sugiya, and further in view of Meltz et al. (5,042,897, hereinafter "Meltz").

Each of the various rejections and objections are overcome by amendments that are made to the specification, drawing, and/or claims, as well as, or in the alternative, by various arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having

been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

Election/Restrictions

The Examiner has made the restriction requirement final.

Rejection Under 35 U.S.C. 103(a)

Claims 1-7, 13-18, 22-24, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazarinov et al. (2004/0076208, hereinafter Kazarinov), and further in view of Appel et al. (5,659,414, hereinafter Appel) and Sugiya (2004/0136053, hereinafter "Sugiya").

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kazarinov, Appel and Sugiya, and further in view of Meltz et al. (5,042,897, hereinafter "Meltz").

Applicants respectfully avoid these grounds of rejection.

The amended independent claims include the feature of a controller that selectively controls the laser diode and the fiber grating by determining the relative intensity noise of said laser diode and reducing a difference between a maximum gain wavelength of said laser diode and a maximum reflection wavelength of said fiber grating in a manner tending to reduce the relative intensity noise of said laser diode. None of the cited prior art teaches or suggests that feature.

Kazarinov discloses a laser diode having a Bragg grating. As admitted by the office action, Kazarinov does not disclose an optical detector and a controller as claimed.

Appel discloses monitoring and adjusting the power output of either a laser diode array used to provide the scanning beams in a ROS system. Appel does not teach or suggest selectively controlling the laser diode and the grating.

Sugiya discloses an optical amplifier that includes a control part that computes the passing-wavelength characteristics of the optical filter and sets the inverse of the computed passing-wavelength characteristic of the optical filter. Sugiya does not teach or suggest selectively controlling the laser diode and the grating.

Thus, Kazarinov in view of Appel and Sugiya, singly or in combination, fail to teach or suggest the feature of a controller that selectively controls the laser diode and the fiber grating by determining the relative intensity noise of said laser diode and reducing a difference between a maximum gain wavelength of said laser diode and a maximum reflection wavelength of said fiber grating in a manner tending to reduce the relative intensity noise of said laser diode.

Therefore, Applicants' claims 1-7, 13-18, 22-24, 26, and 27 are allowable over Kazarinov, Appel and Sugiya under 35 U.S.C. 103(a).

Claim 25 depends from independent claim 22 and includes additional features thereof. For at least the reasons discussed above, claim 25 is patentable over Kazarinov, Appel and Sugiya under 35 U.S.C. 103(a). Meltz fails to bridge the substantial gap between Kazarinov, Appel and Sugiya and Applicants' invention. In particular, Meltz teaches the core 11 of the waveguide or fiber 10, which is to be provided with a series of the embedded inclined Bragg redirection grating elements 14, is preferably of a germanium-doped silica or similar glass that is capable of having the grating elements 14 written, impressed or otherwise applied or embedded therein. Meltz does not teach or suggest the feature of a controller that selectively controls the laser diode and the fiber grating by determining the relative intensity noise of said laser diode and reducing a difference between a maximum gain wavelength of said laser diode

and a maximum reflection wavelength of said fiber grating in a manner tending to reduce the relative intensity noise of said laser diode. None of the cited prior art teaches or suggests that feature.

Therefore, Applicants' claim 25 is allowable over Kazarinov, Appel, Sugiya and Meltz under 35 U.S.C. 103(a).

Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

Dated: 7/26/06

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